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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/025,310

12/18/2001

David Ross Mathog

8215

7590

08/01/2006

David Ross Mathog
1215 Greenfield Avenue
Arcadia, CA 91006

EXAMINER

WILLIAMS, ROSS A

ART UNIT

PAPER NUMBER

3713

DATE MAILED: 08/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Interview Summary	Application No.		Applicant(s)	
	10/025,310		MATHOG, DAVID ROSS	
	Examiner		Art Unit	
	Ross A. Williams		3713	

All participants (applicant, applicant's representative, PTO personnel):

- (1) Ross A. Williams. (3) David Mathog.
 (2) Xuan Thai. (4) Frederic Farina.

Date of Interview: 27 June 2006.

Type: a) ☒ Telephonic b) ☐ Video Conference
 c) ☐ Personal [copy given to: 1) ☐ applicant 2) ☐ applicant's representative]

Exhibit shown or demonstration conducted: d) ☐ Yes e) ☒ No.
 If Yes, brief description: _____.

Claim(s) discussed: 37.

Identification of prior art discussed: Elstein (US 4,702,475).

Agreement with respect to the claims f) ☐ was reached. g) ☒ was not reached. h) ☐ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: Applicant alleged that the device of Elstein did not present to the user truly random signals. The Examiner disagreed. The Applicant also presented ammended claims and proposed potential new claim language.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)


THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN A NON-EXTENDABLE PERIOD OF THE LONGER OF ONE MONTH OR THIRTY DAYS FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.



XUAN M. THAI
SUPERVISORY PATENT EXAMINER

TC3700

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.


 Examiner's signature, if required

Summary of Record of Interview Requirements

Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record

A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews

Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

37 CFR §1.2 Business to be transacted in writing.

All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:

- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

- 1) A brief description of the nature of any exhibit shown or any demonstration conducted,
- 2) an identification of the claims discussed,
- 3) an identification of the specific prior art discussed,
- 4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
- 5) a brief identification of the general thrust of the principal arguments presented to the examiner,
(The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
- 6) a general indication of any other pertinent matters discussed, and
- 7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

JUN 26 2006

PTOL-413A (09-04)
Approved for use through 07/31/2008. OMB 0851-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Applicant Initiated Interview Request Form

Application No.: 10/0257310 First Named Applicant: David Ross Mathog
Examiner: William Ross A. Art Unit: 3713 Status of Application: Final Rejection Mailed

Tentative Participants

(1) David Mathog (2) Frederic Farina
(3) _____ (4) _____Proposed Date of Interview: 6/27/06 Proposed Time: 2:00 EST (AM/PM)

Type of Interview Requested

(1) ☒ Telephonic (2) ☐ Personal (3) ☐ Video ConferenceExhibit To Be Shown or Demonstrated: ☒ YES ☐ NOIf yes, provide brief description: Draft Response to OA of 4/26/2006

Issues To Be Discussed

Issues (Rej., Obj., etc)	Claim/ Fig. #s	Prior Art	Discussed	Agreed	Not Agreed
(1) <u>Rej.</u>	<u>Claim 37</u>	<u>Art. Eskin et al</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(2) _____	_____	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(3) _____	_____	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(4) _____	_____	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

☐ Continuation Sheet Attached

Brief Description of Arguments to be Presented:

Discussion of Draft Response to OA of 4/26/2006 to see if proposed changes overcome examiner's objections.An interview was conducted on the above-identified application on 6/27/06.

NOTE: This form should be completed by applicant and submitted to the examiner in advance of the interview (see MPEP § 713.01).

This application will not be delayed from issue because of applicant's failure to submit a written record of this interview. Therefore, applicant is advised to file a statement of the substance of this interview (37 CFR 1.133(b)) as soon as possible.

David R. Mathog
Applicant/Applicant Representative Signature[Signature]
Examiner/SPE Signature

Typed/Printed Name of Applicant or Representative

Registration Number, if applicable

This collection of information is required by 37 CFR 1.133. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. The collection is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 21 minutes to complete, including gathering, reviewing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time required to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND PAGES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

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Draft Response, dated Jun 16, 2006
Reply to the Office Action of Apr 26, 2006

Appl. No. : 10/025,310 Confirmation No. 8215

Applicant : David Ross Mathog

Filed : 12/18/2001

TC/A.U. : 3713

Examiner : Williams

Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

This FAX contains a draft response to the Office Action dated April 26, 2006. I attempted to reach you by telephone on 6/14 to schedule a call to discuss this draft response. However, your phone mail said you were out of the office until 6/19. Unfortunately I will be out of town 6/19 – 6/23, and the fellow helping me here will be gone 6/29- 7/7. Rather than pushing this back any farther I contacted your supervisor Xuan Thai and requested that this call be placed on your schedule. She set it for 6/27 2:00PM EST (11:00AM PST). Please confirm the receipt of this FAX and that the time is ok for the conference call by leaving a message on my home telephone answering machine at 626/294-0135, or by email to mathog@caltech.edu.

Amendments to the Claims: page 2-6

Remarks begin: page 7.

Appl. No. : 10/025,310 Amended Claims
Draft Response. dated Jun 16, 2006
Reply to the Office Action of Nov 2, 2005

AMENDED CLAIMS

1-36 (canceled).

37 (currently amended). A device to assist in the training of athletes and the playing of

athletic games, the device comprising:

a case;

a first plurality of signaling elements for emitting a first signal, said first plurality of signaling elements being disposed on an outer surface of the case, wherein each element has an on state in which it emits the first signal, and an off state in which it does not emit the first signal;

a second plurality of signaling elements for emitting a second signal, said second signal being distinguishable from the first signal, said second plurality of signaling elements being disposed on an outer surface of the case, wherein each element has an on state in which it emits the second signal, and an off state in which it does not emit the second signal;

a controller for driving said signaling elements, wherein said controller is disposed within the case, ~~wherein said controller drives said signaling elements to produce a sequence of signals that is unpredictable;~~ wherein combinations of the first signal and the second signal define a set of device states, and wherein said controller drives the first plurality of signaling elements and the second plurality of signaling elements to produce a continuous series of said device states which are unpredictable in sequence and duration;

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whereby variation is continuously introduced into the training of athletes and the playing of athletic games.

38 (previously presented). A device according to claim 37, wherein the case is made of a durable material appropriate for use in an athletic activity.

39 (previously presented). A device according to claim 37, wherein the case is conical.

40 (previously presented). A device according to claim 37, wherein the first and second pluralities of signal emitting elements are disposed in rings around the outer surface of the case.

41 (previously presented). A device according to claim 37, wherein the first signal is a light of a first color, and the second signal is a light of a second color.

42 (previously presented). A device according to claim 37, wherein the first and second pluralities of signaling elements are LEDs.

43 (previously presented). A device according to claim 37, wherein power is supplied by a removable battery.

44 (previously presented). A device according to claim 37, wherein the controller comprises a microprocessor.

45 (canceled).

46 (currently amended). A device according to claim ~~37~~ **45**, wherein a dial sets a mean frequency of transitions between device states.

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- 47 (currently amended).** A device according to claim-~~37~~ 45, wherein a dial sets a minimum hold time spent in each device state before a transition to another device state is permitted.
- 48 (currently amended).** A device according to claim-~~37~~ 45, wherein a switch sets an order of transitions between device states as sequential or random.
- 49 (currently amended).** A device according to claim-~~37~~ 45, wherein a switch sets a rate of transitions between device states to be either fixed or randomly varying around a mean frequency.
- 50 (currently amended).** A device according to claim-~~37~~ 45, wherein an occupancy value is set for each device state, said occupancy values determining the average time spent in each device state.
- 51 (currently amended).** A device according to claim-~~37~~ 45, wherein the combinations of the first signal and the second signal define four device states, each of said device states representing a different action to be taken by the athletes.
- 52 (previously presented).** A method for the training of athletes and the playing of athletic games comprising the steps of:
- (a) providing a controlling means, wherein said controlling means exists at any given time is in one of a plurality of device states, wherein over time said controlling means transitions between said device states;
 - (b) providing a setting means, wherein said controlling means periodically reads from said setting means those parameters which determine the order and timing of

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transitions of said controlling means between said device states, wherein said parameters result in said controlling means making a sequence of transitions between said device states which is at least partly random in order or timing;

(c) providing a signaling means, wherein said signaling means is driven by said controlling means, wherein said signaling means may produce a plurality of distinguishable signals corresponding one to one to said plurality of device states, wherein said signaling means produces at each moment in time a signal from said plurality of distinguishable signals which corresponds to that device state in which said controlling means currently exists, wherein said signal is unpredictable by an observer;

whereby allowing athletes to associate said plurality of distinguishable signals one to one with an equal numbered plurality of actions appropriate within the context of athletic training or the playing of athletic games, thus continuously introducing unpredictable variation into athletic training or the playing of athletic games.

53 (previously presented). A method according to claim 52, wherein the controlling means comprises a microprocessor, wherein the setting means comprises dials and switches, wherein the signaling means comprises a set of red LEDs and a set of blue LEDs, wherein said signaling means is capable of producing four distinct signals corresponding to all four combinations of said red LEDs and said blue LEDs when on or off, wherein said controlling means exists in one of four device states corresponding one to one with said four distinct signals, wherein said controlling

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means transitions between said four device states, wherein the parameters affecting the order and timing of said transitions are determined by said dials and switches of said setting means, wherein said parameters direct that the order and timing of said transitions between said four device states is at least partially random, wherein a resulting sequence of device states in which said controlling means exists is unpredictable, wherein a corresponding sequence of signals produced by said signaling means is correspondingly unpredictable, whereby athletes may be directed to perform an unpredictable sequence of four distinct actions by a corresponding unpredictable sequence of four distinct signals.

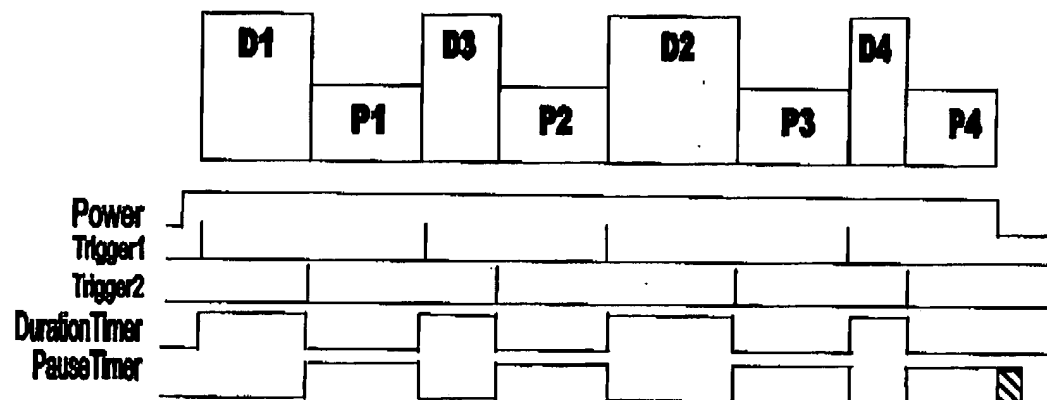
Appl. No. : 10/025,310 Remarks

Draft Response, dated Jun 16, 2006

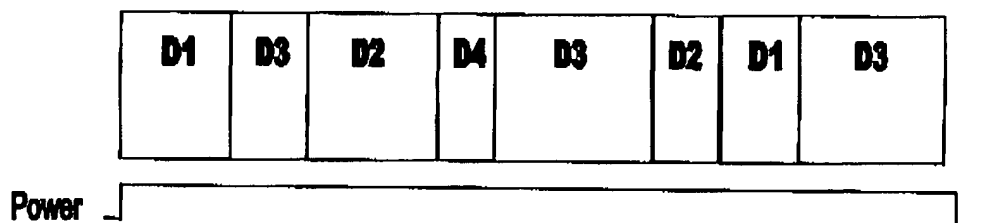
Reply to the Office Action of Apr 26, 2006

The following diagram illustrate some key differences between the device of Elstein et al and that of the present application. The top part of each figure shows the signals that are presented by the device (or absence thereof), and the bottom part shows the interaction of the user with the device, either during use (power, triggers) or by setting fixed length timers (duration, pause).

Elstein et al.



Present Application



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In these diagrams **D1-D4** represent four states displayed by each device which corresponds to an action the athlete is to make immediately (Elstein) or a change in the athletic environment (present application). Once power is applied the device of Elstein emits a series of these states interspersed with pause intervals **P1-P4**, during which the athlete repositions back to "start". The duration of the pause intervals **P** and the state displays **D** are either determined by external triggers (in some implementations) or predetermined (and fixed) by the program being run. Timer controlled durations will be of exactly the same length on every repetition of a particular drill. Elstein presents many preferred implementations and external triggers and/or predetermined intervals are employed in all of them. None of the implementations of Elstein et al is truly unpredictable in both the order and duration of state displays **D**. In some cases the athlete can learn the durations from running the same drills over and over, and in others they know when the state will change because they trigger that event themselves

Once turned on the present device displays a series of states, randomly varying in order and duration, without interruption, until such time as it is turned off. Since there are no pause intervals **P** it provides no mechanism for generating them. There are no fixed duration timers and there are no external triggers. The series of states displayed is determined instead by the mean transition frequency, the minimum hold time, and the four state occupancy values. Unlike the device of Elstein et al, the state which is represented by all lights off does not represent a pause, or no signal, it is just another state

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which may be interpreted by the athlete in accordance with whichever meanings he has chosen to associate with each of the four states of the present device. The random number generator in the controller takes care of the rest and emits a series of states with duration and frequency of appearance consistent with these controlling values. Neither the duration nor the sequence of states displayed can be predicted by the user of the device no matter how long they observe its output. Within the limits of the randomness of the random number generator the device's output is truly unpredictable by the athlete using it.

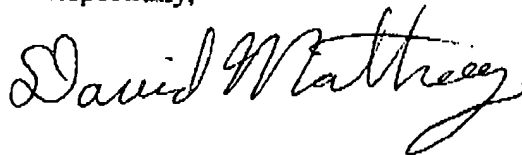
An expanded example of the use of the present device will perhaps help clarify things. In soccer a player dribbling the ball up the field towards the goal typically has to get around an opposing player. During a game when the player with the ball approaches a second player he must constantly assess the changing situation and decide whether to go right, left, wait, kick the ball to another player, or so forth. This is a dynamic process, the state of the game changes continuously. In typical soccer training when alone players now set up a series of cones and pass the ball right on the first cone, left on the second and so forth. This type of training is static and a simple plastic cone is a poor substitute for an opposing player. The present device attempts to better simulate an opposing player. As the athlete dribbles towards it the device of the present application flashes state information which simulates the feints of an opposing player. The player with the ball sees at one time that going right is best, later, that going left would be better, and perhaps later still that passing on neither side is possible. As in a real game the player

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dribbling the ball must constantly assess the situation and be prepared to respond to the current state when he finally gets close enough to the device to actually pass the ball around it. The device, on the other hand, is completely oblivious to the existence of the player and just runs along in accordance with the timing parameters which control the manner in which it randomly and continuously changes state. It does this in such a way that no matter how often the player trains with the present device he will not be able to predict the time of the transition to the next state, nor the identity of that state. That is, it simulates a completely inscrutable opponent.

The draft amended claims which precede these remarks attempt once again to distinguish between the present device and that of Elstein et al. and to illustrate the points made above. Making this distinction is complicated by the fact that some of the key differences are from features present in the device of Elstein et al which are not required nor provided by the present device, but of course the present claims cannot recite features which the device of the present application lacks. In brief, claim 45 of the previous response has been merged into the first claim 37. This required renumbering some of the claims from 46 on to reference claim 37 instead of claim 45.

Respectfully,



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